
**APPARATUS AND METHOD FOR
SPECULATIVE PREFETCHING AFTER DATA CACHE MISSES**

5

ABSTRACT OF THE DISCLOSURE

A microprocessor is configured to continue execution in a special Speculative Prefetching After Data Cache Miss (SPAM) mode after a data cache miss is encountered. The microprocessor includes additional registers and program counter, and optionally
10 additional cache memory for use during the special SPAM mode. By continuing execution during the SPAM mode, multiple outstanding and overlapping cache fill requests may be issued, thus improving performance of the microprocessor.